

REMARKS

Claims 1-4, 6, 8 12, 21-39 are pending in the application and Claims 1, 38 and 39 are amended by the present Response.

REJECTION OF CLAIMS 1, 3, 4, 6, 8, 9, 12, 34, 36-39 UNDER 35 U.S.C § 102(B)

Claims 1, 3, 4, 6, 8, 9, 12, 34, 36-39 are rejected under 35 U.S.C § 102(b) as being anticipated by U.S. Patent No. 5,792,090 (hereinafter "Ladin"). Applicants traverse this rejection.

The Examiner stated that "US 090 [Ladin] discloses wound dressing that supply oxygen to the wound for optimal healing and minimization of infection because the wound causes diffusion limited access and limits the oxygen supply to the wound (abstract; col.2, lines 28-31). The dressing comprises hydrogel or polymeric foam comprising elements that react generate oxygen that are hydrogen peroxide and catalyst such magnesium dioxide or enzymes (col. 5, lines 6-26). The catalyst is contained in the foam which absorbs hydrogen peroxide into the foam to produce oxygen (col. 7, lines 48-55). The hydrogel or foam can be guar gum or polyacrylamide and further comprises collagen, ie, nongellable foam (col.4, lines 39-42, col.12, line 7)."

What is missing from the above quotes is the overall teaching of Ladin. Ladin teaches that the "subject wound dressing is designed to be able to produce a useful level of oxygen, ...on an intermittent basis, followed by periods where little or no oxygen is supplied." See Ladin, Col.4, lines 14-18. Ladin's wound dressings are designed to generate oxygen repeatedly, and multiple embodiments are taught that are capable of regenerating oxygen. Note the use of the plural "periods" indicating that the dressings of Ladin would provide oxygen, then not provide oxygen for a time, then be regenerated to provide oxygen, release all the oxygen, again not provide oxygen for a time, and repeat the cycle.

The dressings of Ladin comprise a "reservoir containing a renewable, non-sustaining chemical oxygen source." See Ladin Col. 5, lines 54-55. By "renewable and non-sustaining" is meant that "the oxygen generated will increase, remain at an elevated level, and then decrease, requiring further addition (renewal) of chemical oxygen source to supply further significant levels of oxygen..." There is no teaching in Ladin of a preformed device comprising closed cells of oxygen.

Additionally, the teaching of Ladin requires a multi-layer device. “The wound itself is normally covered by an occlusive moist dressing, for example, an alginate layer.” See Ladin, Col. 4, lines 18-19. Other materials may form this occlusive layer. The further teaching of Ladin is that the dressing may comprise a membrane between the occlusive wound covering layer and the source of the chemically-derived oxygen. See Ladin, Col. 4, line 55-Col. 5, line 19. In fact, two membranes may be used between the occlusive layer and the “reservoir containing the renewable non-sustaining chemical oxygen source.” See Ladin, Col. 5, line 19-20, Col. Lines 54-55.

Ladin teaches that there is a layer that contains this chemical oxygen source. See Col. 5, lines 50-54 “Abutting the outer surface of the oxygen permeable membrane, that is the surface which will located exterior to the wound with respect to the oxygen permeable membrane is a reservoir containing a renewable, non-sustaining chemical oxygen source. . Again at Col.6, line 6- 8, “In a preferred embodiment, the oxygen reservoir contains a solid which reacts with a supplied liquid to chemically generate oxygen.” Line 30- “The solid oxygen decomposing substance may be loosely contained between the oxygen permeable membrane and an exterior cover of the wound dressing.” Again, at Col. 5, line 47, “Particularly with microporous membranes or perforated plastics material, the solids-containing layer....Applicants’ currently claimed invention does not comprise layers.

Ladin does not provide an anticipatory teaching of the currently pending claims. Ladin does not teach a single unit construct dressing, but instead teaches dressings made of multiple layers. Additionally, Ladin teachings are of dressings that provide oxygen to a wound multiple times and are designed to have oxygen levels depleted and then regenerated at least once, if not several times. These teachings do not anticipate Applicants’ currently pending claims and thus, Applicants respectfully request that the Examiner withdraw the rejection.

REJECTION OF CLAIMS 1-4, 6, 8, 12, 21-39 UNDER 35 U.S.C. § 103(A)

Claims 1-4, 6, 8, 12, 21-39 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Ladin and Gilchrist, et al., U.S. Patent No. 6,187,290 (hereinafter “Gilchrist”). Applicants traverse this rejection.

The Examiner stated that “it would have been obvious ...to provide foam comprising oxygen generated from the reaction hydrogen peroxide and a catalyst as described by [Ladin] and add active agents to the foam as disclosed by [Gilchrist] motivated by the teaching of [Gilchrist] that that foam

forms protective cover to the wound and meanwhile delivers active agents, reasonable expectation of having foam wounding dressing comprising oxygen and active agents that are beneficial to the wound that provides optimal wound healing with minimal risk of infection.” Applicants submit Ladin does not teach formation of a foam of any kind, much less one comprising oxygen by the action of hydrogen peroxide and a catalyst, nor does Gilchrist teach formation of a foam using a catalysts and hydrogen peroxide, therefore, the combination of the two references does not yield a foam formed by the reaction of hydrogen peroxide and a catalyst. The combination of the two references does not render the present invention obvious because when combined, the two references do not teach or suggest the presently claimed invention.

In fact the two references clearly teach away from Applicants’ currently claimed invention. Ladin teaches that “The wound itself is normally covered by an occlusive moist dressing....This layer serves to isolate the wound from infection and in addition maintain the wound in a moist condition, generally recognized as encouraging the healing process, but allows permeation of oxygen,.....” See Ladin, Col. 4, lines 18-23. Gilchrist teaches “The advantages of applying a topical product in the form of a foam include....8. Maintains a moist environment.” See Gilchrist, Col. 3, lines 25-26, 36. The articles of Ladin and Gilchrist are used to keep the wound environment wet and moist. In contrast, Applicants’ currently claimed invention recites that the polymeric matrix is made from a swellable polymer that is capable of absorbing fluid from the site. An aspect of Applicants’ invention is that the invention is capable of providing oxygen to a site while “absorbing excess fluid” (See US2001/0041188 A1, Applicants’ published application, paragraph 0064), “providing a superior moisture regulation capacity” (paragraph 0064); and “enable not only the absorption and management of wound exudates and moisture, but importantly also enable the control of oxygen tension...” (paragraph 0070). Ladin and Gilchrist, either alone or in combination, do not teach or suggest a device that provides oxygen to a site and also provides a swellable polymer for moisture absorption, and in fact, both references teach the benefit of keeping the site well moisturized. Applicants request that the Examiner withdraw this rejection.

CONCLUSION

The foregoing is a complete Response to the Office Action mailed August 2, 2005. Applicants respectfully submit that Claims 1-4, 6, 8 12, 21-39 are patentable, and early and favorable consideration is solicited.

Applicants have included a check in the amount of \$65 for the one month extension of time, but the Commissioner is hereby authorized to charge any other fees that may be required, or to credit any overpayment, to Deposit Account No. 20-1507.

If the Examiner believes there are other issues that can be resolved by a telephone interview, or that there are any informalities that remain in the application which may be corrected by the Examiner's amendment, a telephone call to the undersigned attorney at (404) 885-3652 is respectfully solicited.

Respectfully submitted,

A handwritten signature in black ink, appearing to read 'Mary A. Merchant', with a long horizontal flourish extending to the right.

Mary Anthony Merchant, Ph.D.

Reg. No. 39,771

TROUTMAN SANDERS LLP
Bank of America Plaza
600 Peachtree Street, N.E.
Suite 5200
Atlanta, Georgia 30308-2216
Telephone: (404) 885-3652
Facsimile: (404) 962-6527